

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P644866

Luminaire Tested: OMN4DIP-SR4F0-50D100U935-WBMOOB-1DUDD-WW

Issue Date: 9/2/2020



Test Information

Test Method: LM-79-2019
Report Number: P644866
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2203-563-26, G2-2206-689-27)
Test Lab: INNOVATION CENTER
Issue Date: 9/2/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: OMN4DIP-SR4F0-50D100U935-WBMOOB-1DUDD-WW
Description: NEO-RAY CIRQUE 4-INCH DIAMETER LINEAR LED LUMINAIRE
DOWNLIGHT - WHITE BAFFLE WITH MEDIUM OPTIC - 500 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 1000 LUMENS PER FOOT
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

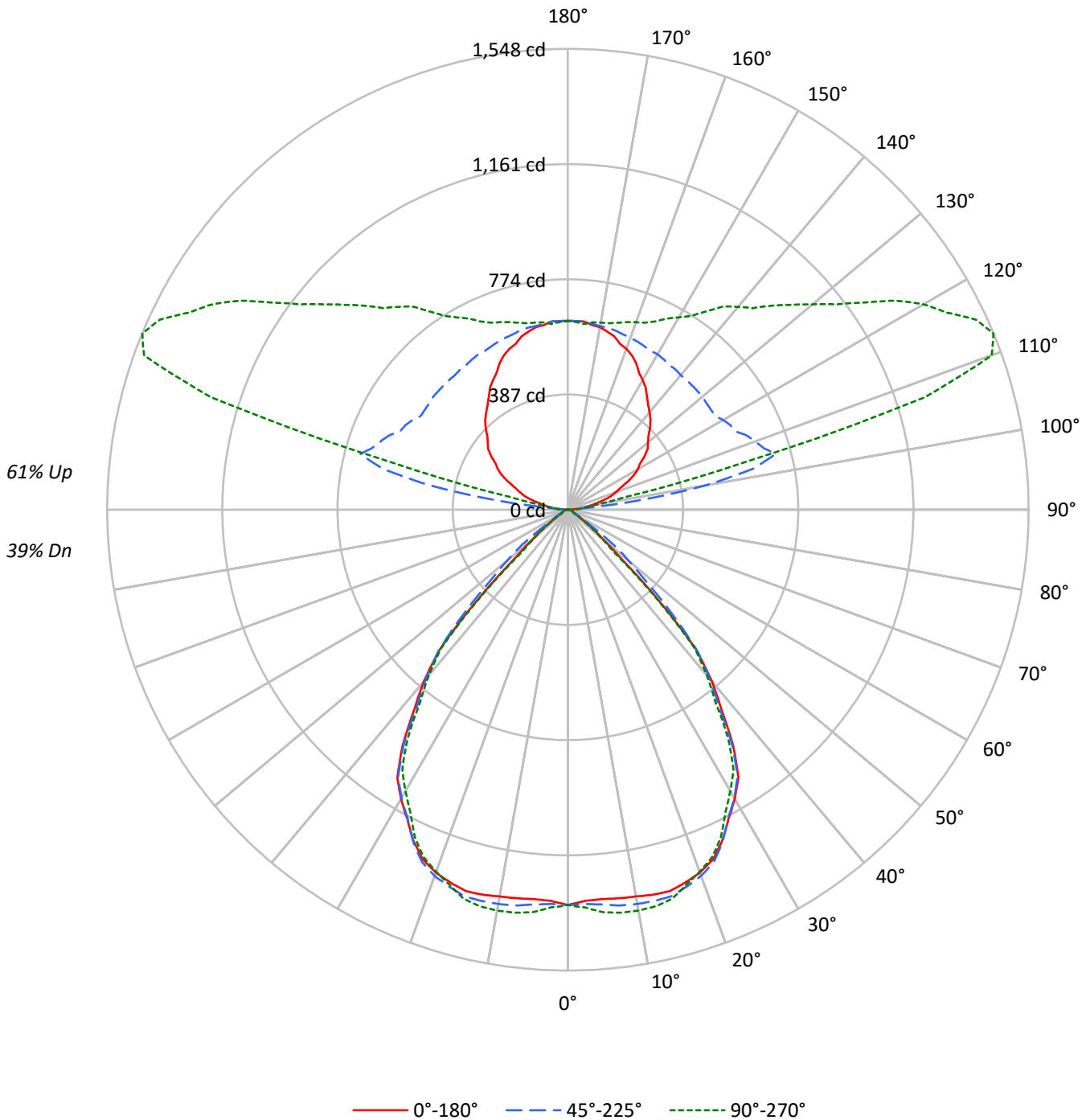
Lumens per Lamp: N/A
Luminaire Lumens: 5543.6 lumens
Efficiency: N/A
Efficacy: 117.4 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.21 / 1.19
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 47.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20	
RC	80					70					50					30					10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0	
RCR																						
0	104	104	104	104	95	95	95	95	77	77	77	61	61	61	46	46	46	39				
1	97	93	90	87	88	85	82	79	69	68	66	55	54	53	42	42	41	35				
2	89	83	78	73	81	76	71	68	63	59	57	50	48	47	39	38	37	32				
3	82	74	68	63	75	68	63	58	56	53	50	46	43	41	36	34	33	29				
4	76	67	60	54	69	61	55	51	51	47	44	42	39	37	33	31	30	26				
5	70	60	53	48	64	55	49	44	47	42	39	38	35	33	31	29	27	24				
6	65	54	47	42	59	50	44	39	42	38	34	35	32	29	28	26	25	22				
7	61	49	42	37	55	46	40	35	39	34	31	32	29	27	26	24	22	20				
8	56	45	38	33	52	42	36	31	36	31	28	30	27	24	24	22	20	18				
9	53	41	35	30	48	39	33	28	33	28	25	28	24	22	23	20	19	17				
10	49	38	32	27	45	36	30	26	31	26	23	26	22	20	21	19	17	15				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17153	17153	17153
5°	17024	17258	17595
10°	17300	17641	17930
15°	17732	17972	18093
20°	17828	17993	17787
25°	17487	17530	17316
30°	16720	16675	16272
35°	15264	15138	14822
40°	12680	12494	12258
45°	7964	9060	7599
50°	3054	5365	2833
55°	1441	2252	1464
60°	698	1137	620
65°	642	672	581
70°	642	642	566
75°	649	649	549
80°	669	595	521
85°	741	593	445

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 9060 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.9	2.3
10°-20°	378.3	6.8
20°-30°	562.0	10.1
30°-40°	588.2	10.6
40°-50°	356.3	6.4
50°-60°	82.2	1.5
60°-70°	22.6	0.4
70°-80°	13.2	0.2
80°-90°	6.0	0.1
90°-100°	78.0	1.4
100°-110°	555.6	10.0
110°-120°	754.3	13.6
120°-130°	613.9	11.1
130°-140°	493.8	8.9
140°-150°	389.3	7.0
150°-160°	284.7	5.1
160°-170°	176.8	3.2
170°-180°	60.3	1.1
0°-30°	1068.3	19.3
0°-40°	1656.5	29.9
0°-60°	2095.0	37.8
0°-90°	2136.9	38.5
90°-120°	1387.9	25.0
90°-150°	2884.9	52.0
90°-180°	3407.0	61.5
0°-180°	5543.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1328	1328	1328	1328	1328	
5°	1313	1343	1331	1336	1357	126
15°	1326	1366	1344	1333	1353	373
25°	1227	1263	1230	1198	1215	562
35°	968	983	960	938	940	595
45°	436	496	496	479	416	335
55°	64	73	100	69	65	66
65°	21	22	22	20	19	21
75°	13	13	13	12	11	14
85°	5	5	4	4	3	5
90°	0	4	8	12	12	2
95°	32	59	32	36	44	36
105°	124	190	722	922	610	130
115°	219	266	622	1293	1512	218
125°	315	358	586	1025	1212	280
135°	391	434	590	844	969	301
145°	463	502	594	736	814	291
155°	542	562	606	667	698	249
165°	602	610	622	638	650	169
175°	634	638	634	630	626	60
180°	634	634	634	634	634	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1328.0	1328.0	1328.0	1328.0	1328.0
2.5°	1315.2	1338.7	1325.6	1326.6	1337.6
5°	1313.0	1343.3	1331.0	1336.5	1357.0
7.5°	1316.6	1348.3	1341.0	1342.9	1365.4
10°	1319.0	1352.2	1345.0	1344.5	1367.0
12.5°	1324.6	1359.4	1345.8	1342.9	1364.6
15°	1326.0	1366.1	1344.0	1333.4	1353.0
17.5°	1313.0	1357.2	1327.4	1305.6	1321.2
20°	1297.0	1342.0	1309.0	1278.4	1294.0
22.5°	1272.2	1316.4	1281.0	1248.0	1264.4
25°	1227.0	1263.2	1230.0	1198.4	1215.0
27.5°	1169.8	1195.2	1166.8	1136.8	1146.2
30°	1121.0	1146.4	1118.0	1087.1	1091.0
32.5°	1066.6	1088.1	1060.4	1032.7	1035.8
35°	968.0	982.7	960.0	938.0	940.0
37.5°	848.0	850.0	834.6	814.6	815.0
40°	752.0	757.9	741.0	725.0	727.0
42.5°	637.6	660.7	644.2	629.8	630.2
45°	436.0	495.6	496.0	478.6	416.0
47.5°	240.8	309.8	354.2	274.7	207.4
50°	152.0	196.0	267.0	160.6	141.0
52.5°	108.8	128.6	195.0	113.6	103.4
55°	64.0	72.8	100.0	68.9	65.0
57.5°	39.0	46.6	58.4	46.0	39.2
60°	27.0	33.8	44.0	30.8	24.0
62.5°	23.8	26.0	34.4	24.6	22.4
65°	21.0	22.0	22.0	20.0	19.0
67.5°	18.6	19.6	18.6	17.6	16.6
70°	17.0	18.0	17.0	16.0	15.0
72.5°	15.4	16.4	15.4	14.4	13.4
75°	13.0	13.0	13.0	12.0	11.0
77.5°	10.6	10.6	10.4	9.6	8.6
80°	9.0	9.0	8.0	8.0	7.0
82.5°	7.4	7.4	6.4	6.4	5.4
85°	5.0	5.0	4.0	4.0	3.0
87.5°	2.4	3.2	3.2	4.0	3.2
90°	0.0	3.9	8.0	12.0	12.0
92.5°	9.6	13.5	17.5	24.8	27.9
95°	31.9	59.2	31.9	36.1	43.9
97.5°	56.6	113.6	234.5	69.2	59.8
100°	75.8	142.1	470.7	138.5	91.7
102.5°	94.9	164.3	636.6	365.6	200.2
105°	123.6	189.9	721.9	922.3	610.3
107.5°	152.4	202.3	689.2	1342.2	1257.2
110°	171.5	218.3	670.1	1410.4	1515.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	190.7	237.5	650.9	1370.5	1547.6
115°	219.4	266.2	622.2	1293.3	1511.7
117.5°	248.9	294.9	615.0	1209.7	1434.3
120°	271.2	314.1	602.3	1146.1	1380.1
122.5°	287.2	333.2	586.3	1091.4	1306.7
125°	315.1	358.0	586.3	1025.3	1212.5
127.5°	338.2	381.9	587.1	948.7	1133.6
130°	351.0	397.8	590.3	897.4	1072.9
132.5°	367.0	413.8	590.3	874.4	1018.7
135°	390.9	433.8	590.3	844.4	969.2
137.5°	410.8	456.8	590.3	811.3	918.2
140°	426.8	469.7	590.3	792.0	889.5
142.5°	442.7	482.5	593.5	769.5	860.7
145°	462.7	501.7	594.3	735.7	813.7
147.5°	486.6	520.9	599.1	711.3	771.4
150°	502.6	533.8	602.3	695.2	745.9
152.5°	518.5	546.6	602.3	682.2	723.5
155°	542.5	562.0	606.3	666.8	698.0
157.5°	561.6	580.3	611.1	657.0	679.7
160°	574.4	590.0	614.2	650.6	670.1
162.5°	583.9	599.5	617.4	647.3	660.5
165°	602.3	610.1	622.2	638.4	650.1
167.5°	612.7	619.7	626.2	634.4	641.4
170°	622.2	626.1	626.2	634.3	638.2
172.5°	625.4	632.4	629.4	631.1	635.0
175°	634.2	638.1	634.2	630.1	626.2
177.5°	634.2	637.3	634.2	634.1	631.0
180°	634.2	634.2	634.2	634.2	634.2

(END OF REPORT)